

Date: Fri, 15 Oct 93 16:00:00 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #1226  
To: Info-Hams

Info-Hams Digest                      Fri, 15 Oct 93                      Volume 93 : Issue 1226

Today's Topics:

50th Anniversary of the Handheld...

ORBS\$288.2L

ORBS\$288.W.AMSAT

Weekly Solar Terrestrial Forecast & Review for 15 October

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>

Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>

Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----

Date: Thu, 14 Oct 1993 20:19:03 GMT  
From: elroy.jpl.nasa.gov!sdd.hp.com!portal!lhaven.UUmh.Ab.Ca!combdyn!  
lawrence@ames.arpa  
Subject: 50th Anniversary of the Handheld...  
To: info-hams@ucsd.edu

In article <CEvrv3.8uD@news.Hawaii.Edu> jherman@uhunix3.uhcc.Hawaii.Edu (Jeff  
Herman) writes:

>Gang,

> Motorola placed a rather unusual ad in our morning newspaper,

>The Honolulu Advertiser, on Tuesday; it read something like this:

>

>

>

>                      M                      MOTOROLA INC.

>

>ANNOUNCING THE 50TH ANNIVERSARY OF THE HANDHELD RADIO

>

>MOTOROLA PRESENTS THE WORLDS SMALLEST 2-WAY RADIO

>  
> THE VICAR  
>  
>  
>  
>[shows a drawing of a hand holding a radio about the size of a pack of cigs]

Hmmm, a pack of cigs must have gotten smaller since I last saw one. I'm sure I've seen handhelds smaller than a pack of cigs before. A paramedic in town uses one....its a 2m radio, with the TX opened up for the Ambulance channels (158.76 and 159.45).....or was that the other way around?

--

--EMAIL-----PHONE-----FAX-----  
| WORK: lawrence@combdyn.com | (403)529-2162 | (403)529-2516 | CallSign  
| HOME: dreamer@lhaven.uumh.ab.ca | (403)526-6019 | (403)529-5102 | VE6LKC  
-----

disclamer = (working\_for && !representing) + (Combustion Dynamics Ltd.);

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Date: 15 Oct 93 20:31:00 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: ORBS\$288.2L  
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-288.N  
2Line Orbital Elements 288.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT  
FROM WA5QGD FORT WORTH,TX October 15, 1993  
BID: \$ORBS-288.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:

1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCC 00000-0 00000-0 0 DDDZ  
2 AAAAA EEE.EEEE FFF.FFFF GGGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ  
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN  
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

A0-10

1 14129U 83058B 93279.33702867 -.000000081 00000-0 10000-3 0 824  
2 14129 27.1481 2.4799 6019419 119.8710 312.5993 2.05881755 77546

U0-11

1 14781U 84 21 B 93287.01910323 .000000333 00000-0 60525-4 0 6026  
2 14781 97.8038 308.1221 0011698 343.7711 16.3119 14.69066684514164

RS-10/11

1 18129U 87 54 A 93286.63524979 -.000000137 000000-0 -15715-3 0 8026  
 2 18129 82.9272 151.0843 0011771 355.8415 4.2641 13.72323405316099  
 AO-13  
 1 19216U 88051B 93281.01224299 -.000000111 000000-0 10000-4 0 6955  
 2 19216 57.8884 290.6961 7215384 325.7101 4.0040 2.09725266 40723  
 FO-20  
 1 20480U 90 13 C 93286.05864589 -.000000014 000000-0 -22763-5 0 6012  
 2 20480 99.0206 119.8565 0540673 179.4597 180.7200 12.83221389172438  
 AO-21  
 1 21087U 91 6 A 93286.04684787 .000000046 000000-0 41840-4 0 3542  
 2 21087 82.9463 325.6114 0036668 54.2687 306.1872 13.74525633135639  
 RS-12/13  
 1 21089U 91 7 A 93285.72497418 .000000142 000000-0 13846-3 0 6029  
 2 21089 82.9243 194.9512 0030810 77.1277 283.3318 13.74028313134664  
 ARSENE  
 1 22654U 93 31 B 93282.56758711 -.000000050 000000-0 99999-4 0 2010  
 2 22654 1.3450 116.0755 2933466 157.4440 219.9134 1.42201061 2195  
 UO-14  
 1 20437U 90 5 B 93287.74004034 .000000072 000000-0 35590-4 0 9020  
 2 20437 98.6074 10.6604 0010837 188.2101 171.8903 14.29796548194513  
 AO-16  
 1 20439U 90 5 D 93285.21602800 .000000109 000000-0 49992-4 0 7027  
 2 20439 98.6146 9.1530 0011065 196.1718 163.9127 14.29854129194163  
 DO-17  
 1 20440U 90 5 E 93287.78324469 .000000081 000000-0 39393-4 0 7028  
 2 20440 98.6149 11.9369 0011286 187.9570 172.1434 14.29991244194543  
 WO-18  
 1 20441U 90 5 F 93287.68449871 .000000047 000000-0 26157-4 0 7030  
 2 20441 98.6151 11.8577 0011859 188.4687 171.6297 14.29969421194530  
 LO-19  
 1 20442U 90 5 G 93285.71973157 .000000081 000000-0 39132-4 0 7026  
 2 20442 98.6154 10.1138 0012034 194.7920 165.2908 14.30060813194262  
 UO-22  
 1 21575U 91 50 B 93285.23553413 .000000131 000000-0 51258-4 0 4027  
 2 21575 98.4589 359.4059 0007231 316.6360 43.4257 14.36856146117477  
 KO-23  
 1 22077U 92052B 93278.76031854 .000000000 000000-0 10000-3 0 1603  
 2 22077 66.0854 92.6845 0002474 358.7953 1.3056 12.86280742 54059  
 AO-27  
 1 22825U 93 61 C 93285.75852196 .000000108 000000-0 52220-4 0 2029  
 2 22825 98.6768 358.7223 0007582 207.9609 152.1156 14.27584304 2371  
 IO-26  
 1 22826U 93 61 D 93285.89749859 -.000000738 000000-0 -29118-3 0 2037  
 2 22826 98.6800 358.8662 0008357 209.4671 150.6040 14.27683559 2405  
 KO-25  
 1 22830U 93 61 H 93286.24408072 .000000388 000000-0 17241-3 0 2034  
 2 22830 98.5818 359.0811 0011764 176.3255 183.8015 14.28008897 2455  
 NOAA-9

1 15427U 84123 A 93286.56991615 -.000000037 00000-0 -93954-5 0 6036  
 2 15427 99.0883 328.7222 0014761 191.6283 168.4317 14.13551898455495  
 NOAA-10  
 1 16969U 86 73 A 93282.32403798 -.000000079 00000-0 -25557-4 0 5010  
 2 16969 98.5167 293.9484 0013116 347.1838 12.8994 14.24834419366877  
 MET-2/17  
 1 18820U 88 5 A 93285.03200310 .000000033 00000-0 23664-4 0 2013  
 2 18820 82.5394 105.9887 0016962 153.8192 206.3830 13.84694680288013  
 MET-3/2  
 1 19336U 88 64 A 93288.07651144 .000000043 00000-0 99999-4 0 2029  
 2 19336 82.5421 137.1408 0017195 152.6559 207.5504 13.16961632250992  
 NOAA-11  
 1 19531U 88 89 A 93286.57234186 .000000186 00000-0 12097-3 0 4022  
 2 19531 99.1474 264.7961 0012679 103.4202 256.8674 14.12922617260390  
 MET-2/18  
 1 19851U 89 18 A 93285.09728344 .000000100 00000-0 83752-4 0 2021  
 2 19851 82.5208 341.7155 0013817 197.6615 162.3951 13.84346436233368  
 MET-3/3  
 1 20305U 89 86 A 93287.40151059 .000000043 00000-0 99999-4 0 9036  
 2 20305 82.5504 80.7645 0016082 174.5084 185.6564 13.16023037190788  
 MET-2/19  
 1 20670U 90 57 A 93284.85954447 .000000096 00000-0 81070-4 0 7025  
 2 20670 82.5464 45.7127 0017111 120.8594 239.4252 13.84178556166268  
 FY-1/2  
 1 20788U 90 81 A 93287.99948046 .000000299 00000-0 22124-3 0 8051  
 2 20788 98.8532 310.7800 0014848 339.5002 20.5586 14.01308633159367  
 MET-2/20  
 1 20826U 90 86 A 93286.20117621 .000000096 00000-0 81888-4 0 7023  
 2 20826 82.5269 342.4946 0014066 25.5065 334.6787 13.83560871153609  
 MET-3/4  
 1 21232U 91 30 A 93287.22970807 .000000043 00000-0 99999-4 0 6035  
 2 21232 82.5432 343.4821 0014836 82.2352 278.0453 13.16455196118993  
 NOAA-12  
 1 21263U 91 32 A 93286.77520452 -.00001807 00000-0 -80439-3 0 8050  
 2 21263 98.6474 314.6741 0012266 228.2203 131.8070 14.22316336125498  
 MET-3/5  
 1 21655U 91 56 A 93285.20994771 .000000043 00000-0 99999-4 0 6023  
 2 21655 82.5547 291.8713 0014636 96.3433 263.9392 13.16825416103826  
 NOAA-13  
 1 22739U 93050 A 93277.06382288 .000000179 00000-0 10006-3 0 252  
 2 22739 098.9148 217.8797 0009985 121.5673 238.7045 14.10854129007833  
 MET-2/21  
 1 22782U 93 55 A 93286.73557409 .000000094 00000-0 80089-4 0 2020  
 2 22782 82.5482 41.7313 0022204 192.7322 167.3281 13.82987190 6021  
 MIR  
 1 16609U 86 17 A 93287.91659936 .00012841 00000-0 17250-3 0 5137  
 2 16609 51.6198 337.9204 0006216 305.1714 54.9308 15.58279881437791  
 HUBBLE

1 20580U 90 37 B 93285.89217617 .00001014 00000-0 88377-4 0 3461  
 2 20580 28.4714 25.6000 0004277 200.8921 159.1488 14.92864914189112  
 GRO  
 1 21225U 91 27 B 93287.69243962 -.00003187 00000-0 -27197-4 0 2041  
 2 21225 28.4596 143.8399 0031997 73.7914 284.4661 15.69123449 18964  
 UARS  
 1 21701U 91063B 93278.64533739 .00002432 00000-0 23513-3 0 3014  
 2 21701 56.9828 98.8945 0004765 103.9118 256.2447 14.96188134112828  
 POSAT  
 1 22829U 93 61 G 93286.45464408 -.00000675 00000-0 -26396-3 0 2032  
 2 22829 98.6757 359.4183 0010287 192.1840 167.9104 14.27974280 2489  
 /EX

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Date: 15 Oct 93 20:25:00 GMT  
 From: news-mail-gateway@ucsd.edu  
 Subject: ORBS\$288.W.AMSAT  
 To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-288.W  
 Orbital Elements 288.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES  
 FROM WA5QGD FORT WORTH, TX October 15, 1993  
 BID: \$ORBS-288.W  
 TO ALL RADIO AMATEURS BT

Satellite: NOAA-9  
 Catalog number: 15427  
 Epoch time: 93286.56991615  
 Element set: 603  
 Inclination: 99.0883 deg  
 RA of node: 328.7222 deg  
 Eccentricity: 0.0014761  
 Arg of perigee: 191.6283 deg  
 Mean anomaly: 168.4317 deg  
 Mean motion: 14.13551898 rev/day  
 Decay rate: -3.7e-07 rev/day^2  
 Epoch rev: 45549  
 Checksum: 343

Satellite: NOAA-10  
 Catalog number: 16969  
 Epoch time: 93282.32403798  
 Element set: 501  
 Inclination: 98.5167 deg  
 RA of node: 293.9484 deg

Eccentricity: 0.0013116  
Arg of perigee: 347.1838 deg  
Mean anomaly: 12.8994 deg  
Mean motion: 14.24834419 rev/day  
Decay rate:  $-7.9\text{e-}07$  rev/day<sup>2</sup>  
Epoch rev: 36687  
Checksum: 350

Satellite: MET-2/17  
Catalog number: 18820  
Epoch time: 93285.03200310  
Element set: 201  
Inclination: 82.5394 deg  
RA of node: 105.9887 deg  
Eccentricity: 0.0016962  
Arg of perigee: 153.8192 deg  
Mean anomaly: 206.3830 deg  
Mean motion: 13.84694680 rev/day  
Decay rate:  $3.3\text{e-}07$  rev/day<sup>2</sup>  
Epoch rev: 28801  
Checksum: 297

Satellite: MET-3/2  
Catalog number: 19336  
Epoch time: 93288.07651144  
Element set: 202  
Inclination: 82.5421 deg  
RA of node: 137.1408 deg  
Eccentricity: 0.0017195  
Arg of perigee: 152.6559 deg  
Mean anomaly: 207.5504 deg  
Mean motion: 13.16961632 rev/day  
Decay rate:  $4.3\text{e-}07$  rev/day<sup>2</sup>  
Epoch rev: 25099  
Checksum: 295

Satellite: NOAA-11  
Catalog number: 19531  
Epoch time: 93286.57234186  
Element set: 402  
Inclination: 99.1474 deg  
RA of node: 264.7961 deg  
Eccentricity: 0.0012679  
Arg of perigee: 103.4202 deg  
Mean anomaly: 256.8674 deg  
Mean motion: 14.12922617 rev/day  
Decay rate:  $1.86\text{e-}06$  rev/day<sup>2</sup>  
Epoch rev: 26039

Checksum: 315

Satellite: MET-2/18

Catalog number: 19851

Epoch time: 93285.09728344

Element set: 202

Inclination: 82.5208 deg

RA of node: 341.7155 deg

Eccentricity: 0.0013817

Arg of perigee: 197.6615 deg

Mean anomaly: 162.3951 deg

Mean motion: 13.84346436 rev/day

Decay rate: 1.00e-06 rev/day<sup>2</sup>

Epoch rev: 23336

Checksum: 306

Satellite: MET-3/3

Catalog number: 20305

Epoch time: 93287.40151059

Element set: 903

Inclination: 82.5504 deg

RA of node: 80.7645 deg

Eccentricity: 0.0016082

Arg of perigee: 174.5084 deg

Mean anomaly: 185.6564 deg

Mean motion: 13.16023037 rev/day

Decay rate: 4.3e-07 rev/day<sup>2</sup>

Epoch rev: 19078

Checksum: 286

Satellite: MET-2/19

Catalog number: 20670

Epoch time: 93284.85954447

Element set: 702

Inclination: 82.5464 deg

RA of node: 45.7127 deg

Eccentricity: 0.0017111

Arg of perigee: 120.8594 deg

Mean anomaly: 239.4252 deg

Mean motion: 13.84178556 rev/day

Decay rate: 9.6e-07 rev/day<sup>2</sup>

Epoch rev: 16626

Checksum: 325

Satellite: FY-1/2

Catalog number: 20788

Epoch time: 93287.99948046

Element set: 805

Inclination: 98.8532 deg  
RA of node: 310.7800 deg  
Eccentricity: 0.0014848  
Arg of perigee: 339.5002 deg  
Mean anomaly: 20.5586 deg  
Mean motion: 14.01308633 rev/day  
Decay rate: 2.99e-06 rev/day^2  
Epoch rev: 15936  
Checksum: 329

Satellite: MET-2/20  
Catalog number: 20826  
Epoch time: 93286.20117621  
Element set: 702  
Inclination: 82.5269 deg  
RA of node: 342.4946 deg  
Eccentricity: 0.0014066  
Arg of perigee: 25.5065 deg  
Mean anomaly: 334.6787 deg  
Mean motion: 13.83560871 rev/day  
Decay rate: 9.6e-07 rev/day^2  
Epoch rev: 15360  
Checksum: 304

Satellite: MET-3/4  
Catalog number: 21232  
Epoch time: 93287.22970807  
Element set: 603  
Inclination: 82.5432 deg  
RA of node: 343.4821 deg  
Eccentricity: 0.0014836  
Arg of perigee: 82.2352 deg  
Mean anomaly: 278.0453 deg  
Mean motion: 13.16455196 rev/day  
Decay rate: 4.3e-07 rev/day^2  
Epoch rev: 11899  
Checksum: 299

Satellite: NOAA-12  
Catalog number: 21263  
Epoch time: 93286.77520452  
Element set: 805  
Inclination: 98.6474 deg  
RA of node: 314.6741 deg  
Eccentricity: 0.0012266  
Arg of perigee: 228.2203 deg  
Mean anomaly: 131.8070 deg  
Mean motion: 14.22316336 rev/day



Decay rate: -1.807e-05 rev/day^2  
Epoch rev: 12549  
Checksum: 288

Satellite: MET-3/5  
Catalog number: 21655  
Epoch time: 93285.20994771  
Element set: 602  
Inclination: 82.5547 deg  
RA of node: 291.8713 deg  
Eccentricity: 0.0014636  
Arg of perigee: 96.3433 deg  
Mean anomaly: 263.9392 deg  
Mean motion: 13.16825416 rev/day  
Decay rate: 4.3e-07 rev/day^2  
Epoch rev: 10382  
Checksum: 314

Satellite: NOAA-13  
Catalog number: 22739  
Epoch time: 93277.06382288  
Element set: 25  
Inclination: 098.9148 deg  
RA of node: 217.8797 deg  
Eccentricity: 0.0009985  
Arg of perigee: 121.5673 deg  
Mean anomaly: 238.7045 deg  
Mean motion: 14.10854129 rev/day  
Decay rate: 1.79e-06 rev/day^2  
Epoch rev: 00783  
Checksum: 344

Satellite: MET-2/21  
Catalog number: 22782  
Epoch time: 93286.73557409  
Element set: 202  
Inclination: 82.5482 deg  
RA of node: 41.7313 deg  
Eccentricity: 0.0022204  
Arg of perigee: 192.7322 deg  
Mean anomaly: 167.3281 deg  
Mean motion: 13.82987190 rev/day  
Decay rate: 9.4e-07 rev/day^2  
Epoch rev: 602  
Checksum: 290

/EX

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Date: 15 Oct 93 21:08:37 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Weekly Solar Terrestrial Forecast & Review for 15 October  
To: info-hams@ucsd.edu

--- SOLAR TERRESTRIAL FORECAST AND REVIEW ---  
October 15 to October 24, 1993

Report Released by Solar Terrestrial Dispatch  
P.O. Box 357, Stirling, Alberta, Canada  
T0K 2E0  
Accessible BBS System: (403) 756-3008

-----  
SOLAR AND GEOPHYSICAL ACTIVITY FORECASTS AT A GLANCE  
-----

10-DAY SOLAR/RADIO/MAGNETIC/AURORAL ACTIVITY OUTLOOK

	10.7 cm	HF Propagation +/- CON							SID					AU.BKSR DX				Mag	Aurora		
	SolrFlx	LO	MI	HI	PO	SWF	%MUF	%	ENH	LO	MI	HI		LO	MI	HI	%	K Ap	LO	MI	HI
--	-----	-----							-----	-----				-----				----	-----		
15	090	G	G	F	F	20	00	75	20	NA	NA	NA		00	05	10	35	2 08	NV	NV	LO
16	093	G	G	F	F	20	00	75	20	NA	NA	NA		00	05	10	35	2 08	NV	NV	LO
17	095	G	G	F	F	20	-05	70	20	NA	NA	NA		01	10	15	30	3 12	NV	NV	MO
18	097	G	G	F	F	20	-05	70	20	NA	NA	NA		01	10	15	30	3 12	NV	NV	MO
19	097	G	G	F	F	20	-05	70	20	NA	NA	NA		01	10	15	30	2 10	NV	NV	LO
20	095	G	G	F	F	15	00	70	15	NA	NA	NA		01	10	15	35	2 10	NV	NV	LO
21	093	G	G	F	F	15	00	70	15	NA	NA	NA		01	10	15	35	3 12	NV	NV	LO
22	095	G	G	F	F	15	00	65	15	NA	NA	NA		02	10	15	35	2 10	NV	NV	LO
23	100	G	G	F	F	20	00	65	20	NA	NA	NA		02	10	15	35	3 12	NV	NV	LO
24	105	G	G	F	F	25	00	65	25	NA	NA	NA		02	10	15	35	2 10	NV	NV	LO

DEFINITIONS:

Date (day only)

10.7 cm SOLar radio FLuX forecast

HF Propagation Conditions for LOW, MIddle, HIGh, and POLar areas (see below)

HF Short Wave Fade Probability (in %)

HF Maximum Usable Frequency in +/- percent above seasonal normals.

HF Prediction CONFidence Level (in %)

VHF Sudden Ionospheric ENHancement Probs (in %), weighted for low-mid lats

PROBability of "s"poradic E (Es) during the UT day for low, mid and high lats

VHF AUroral BackScatter Probs (in %) for LOW, MIddle and HIGh Latitudes

VHF Overall Global DX Potential (in %) - weighted for Low and Middle latitudes

Geomagnetic Activity Kp Index (peak value - see below)  
 GeoMAGnetic Activity Ap Index (peak value - see below)  
 AURORA1 Activity for LOw, MIddle and HIgh Latitudes (see below)

HF Prop. Quality rated as: EG=Extremely Good, VG=Very Good, G=Good, F=Fair, P=Poor, VP=Very Poor, EP=Extremely Poor.  
 Probability of Sporadic E (Es) for the various latitudes is given in percent.  
 Kp Planetary Index rated: 0=V.Quiet, 1=Quiet, 2=Unstld, 3=Active, 4=V.Active, 5=Minor Storm, 6=Major Storm, 7=Maj-Sev Storm, 8=Severe Storm, 9=V.Severe.  
 Ap Planetary Index rated: 0-7=Quiet, 8-16=Unstld, 17-29=Active, 30-49=Minor Storm, 50-99=Major Storm, Severe Storm >=100.  
 Auroral Activity rated: NV=Not Visible, LO=Low, MO=Moderate, HI=High, VH=Very High.

#### PEAK PLANETARY 10-DAY GEOMAGNETIC ACTIVITY OUTLOOK (15 OCT - 24 OCT)

EXTREMELY SEVERE												HIGH
VERY SEVERE STORM												HIGH
SEVERE STORM												MODERATE
MAJOR STORM												LOW - MOD.
MINOR STORM												LOW
VERY ACTIVE												NONE
ACTIVE			*	*								NONE
UNSETTLED	*	*	***	***	***	**	***	***	***	***	***	NONE
QUIET	***	***	***	***	***	***	***	***	***	***	***	NONE
VERY QUIET	***	***	***	***	***	***	***	***	***	***	***	NONE
-----												
Geomagnetic Field	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		Anomaly
Conditions	Given in 8-hour UT intervals											Intensity

CONFIDENCE LEVEL: 70%

#### NOTES:

Predicted geomagnetic activity is based heavily on recurrent phenomena. Transient energetic solar events cannot be predicted reliably over periods in excess of several days. Hence, there may be some deviations from the predictions due to the unpredictable transient solar component.

#### 60-DAY GRAPHICAL ANALYSIS OF GEOMAGNETIC ACTIVITY

82	-----	J	
78		J	
74		J	
70		J	

66	J			J					
62	J			J					
57	J			J					
53	J			J					
49	J			J					
45	J			J					
41	J			J					
37	J			J				M	
33	JM		M	J				M	
29	JM		MM	JM				M	
25	JM		MM	JM		A		MA	
21	JM		MM	JM		A		MAA	
16	JMA	A	MM	JMA	A	A		MAA	
12	JMAU	A	MM	JMA	A	U	UUA	U AMAAUU	
8	JMAUU	AUU	MMUUU	UJMA	AU	UUUU	UUA	U AMAAUU	
4	JMAUUUUQQQ	QAUUQ	QMMUUUUQQQU	JMAUQQQ	AUUUUUUUUUUU	AUQQQU	AMAAUUU		
0	JMAUUUUQQQQ	AUUQQQ	QMMUUUUQQQU	JMAUQQQ	AUUUUUUUUUUU	AUQQQU	QAMAAUUU		

Chart Start Date: Day #228

#### NOTES:

This graph is determined by plotting the greater of either the planetary A-index or the Boulder A-index. Graph lines are labelled according to the severity of the activity which occurred on each day. The left-hand column represents the associated A-Index for that day.  
 Q = Quiet, U = Unsettled, A = Active, M = Minor Storm, J = Major Storm, and S = Severe Storm.

#### CUMULATIVE GRAPHICAL CHART OF THE 10.7 CM SOLAR RADIO FLUX

129	
127	*
125	**
123	** *
121	* ****
119	* ****
117	*****
115	*****
113	*****
111	*****
109	*****
107	*****
105	* *****
103	*****
101	*****

```

099 | ***** |
097 | ***** |
095 | * ***** |
093 | * *** ***** |
091 | ***** ***** |
089 | ***** *** ***** |
087 | ***** * ***** |
085 | ***** **** ***** |
083 | ***** ***** ***** |
081 | ***** ***** ***** |
079 | ***** ***** |
077 | ***** |

```

-----  
Chart Start: Day #228

# GRAPHICAL ANALYSIS OF 90-DAY AVERAGE SOLAR FLUX

```

105 | ----- |
104 | *** |
103 | ***** |
102 | ***** |
101 | ***** |
100 | ***** |
099 | ***** |
098 | ***** |
097 | ***** |
096 | ***** ***** |
095 | ***** ***** |
094 | ***** ***** |
093 | ***** |
092 | ***** |

```

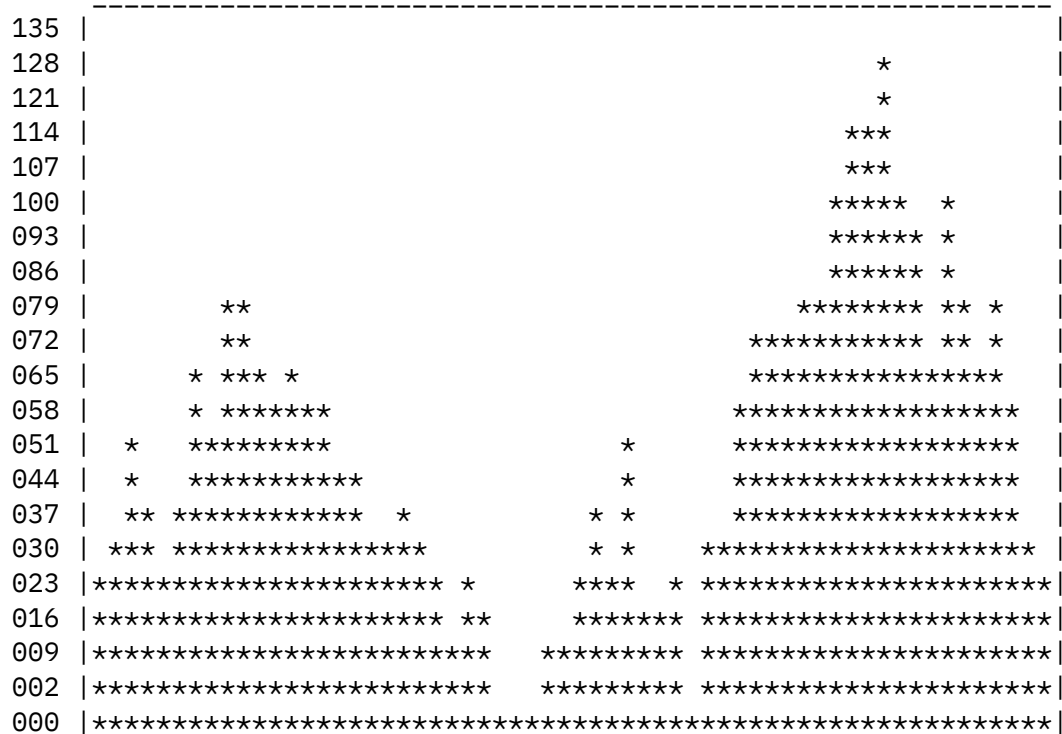
-----  
Chart Start: Day #228

## NOTES:

The 10.7 cm solar radio flux is plotted from data reported by the Penticton Radio Observatory (formerly the ARO from Ottawa). High solar flux levels denote higher levels of activity and a greater number of sunspot groups on the Sun. The 90-day mean solar flux graph is charted from the 90-day mean of the 10.7 cm solar radio flux.

## CUMULATIVE GRAPHICAL CHART OF SUNSPOT NUMBERS

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#### NOTES:

The graphical chart of sunspot numbers is created from the daily sunspot number counts as reported by the SESC.

#### HF RADIO SIGNAL PROPAGATION PREDICTIONS (15 OCT - 24 OCT)

##### High Latitude Paths

CONFIDENCE LEVEL ----- 75%	EXTREMELY GOOD												
	VERY GOOD												
	GOOD												
	FAIR	***	***	**	**	***	***	***	***	***	***	***	
	POOR			*	*								
	VERY POOR												
	EXTREMELY POOR												
	-----	---	---	---	---	---	---	---	---	---	---	---	---
	PROPAGATION	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	QUALITY	Given in 8 Local-Hour Intervals											

##### Middle Latitude Paths







80%												80%							
60%	*	*	*	*	*	*	*	*	*	*	*	60%							
40%	***	***	***	***	***	***	***	***	***	***	***	40%							
20%	***	***	***	***	***	***	***	***	***	***	***	20%							
0%	***	***	***	***	***	***	***	***	***	***	***	0%	*	*	*	*	*	*	*
-----	---	---	---	---	---	---	---	---	---	---	---	-----	-	-	-	-	-	-	-
CHANCE OF	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		F	S	S	M	T	W	T	F
VHF DX	Given in 8 hour local time intervals											AURORAL BACKSCATTER							
-----	-----											-----							

#### NOTES:

These VHF DX prediction charts are defined for the 30 MHz to 220 MHz bands. They are based primarily on phenomena which can affect VHF DX propagation globally. They should be used only as a guide to potential DX conditions on VHF bands. Latitudinal boundaries are the same as those for the HF predictions charts.

#### AURORAL ACTIVITY PREDICTIONS (15 OCT - 24 OCT)

##### High Latitude Locations

CONFIDENCE LEVEL ----- 70%	EXTREMELY HIGH												
	VERY HIGH												
	HIGH												
	MODERATE		*	*									
	LOW	***	***	***	***	***	***	***	***	***	***	***	***
	NOT VISIBLE	***	***	***	***	***	***	***	***	***	***	***	***
	-----	---	---	---	---	---	---	---	---	---	---	---	---
	AURORAL	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	INTENSITY	Eve.Twilight/Midnight/Morn.Twilight											
	-----	-----											

##### Middle Latitude Locations

CONFIDENCE LEVEL ----- 80%	EXTREMELY HIGH												
	VERY HIGH												
	HIGH												
	MODERATE												
	LOW												
	NOT VISIBLE	***	***	***	***	***	***	***	***	***	***	***	***
	-----	---	---	---	---	---	---	---	---	---	---	---	---
	AURORAL	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun		
	INTENSITY	Eve.Twilight/Midnight/Morn.Twilight											
	-----	-----											

##### Low Latitude Locations

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CONFIDENCE LEVEL ----- 95%	EXTREMELY HIGH											
	VERY HIGH											
	HIGH											
	MODERATE											
	LOW											
	NOT VISIBLE	***	***	***	***	***	***	***	***	***	***	***
	-----	---	---	---	---	---	---	---	---	---	---	---
	AURORAL	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
	INTENSITY	Eve.Twilight/Midnight/Morn.Twilight										

NOTE:

Version 2.00b of our Professional Dynamic Auroral Oval Simulation Software Package is now available. This professional software is particularly valuable to radio communicators, aurora photographers, educators, and astronomers. For more information regarding this software, contact: "Oler@Rho.Uleth.CA", or "COler@Solar.Stanford.Edu".

For more information regarding these charts, send a request for the document, "Understanding Solar Terrestrial Reports" to: "Oler@Rho.Uleth.Ca" or to: "COler@Solar.Stanford.Edu". This document, as well as others and related data/forecasts exist on the STD BBS at: (403) 756-3008.

\*\* End of Report \*\*

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End of Info-Hams Digest V93 #1226

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